

## New Lycaenid Butterflies from Mindanao, the Philippines

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In the present paper, I am going to deal with new species of lycaenid butterflies belonging to the genera *Narathura*, *Eliotia*, *Catapaecilma* and *Sinthusia*, all of which were discovered in the Apo area of Mindanao, the Philippines. The holotypes designated herein are all to be preserved in the Osaka Museum of Natural History.

*Narathura matsutaroi* H. HAYASHI, sp. nov.

(Figs. 1, 2, 9)

♂. Upperside:— Metallic violet, bluish on hindwing; costal and distal margins narrowly black except for the costa of hindwing which is broadly black; tail single, black, with the tip white; anal portion of hindwing brownish gray, becoming darker posteriorly and sparsely dusted with bluish scales basally.

Underside:— Pale brown with white narrow stripes as illustrated, no round markings except in basal areas (Fig. 2). On the forewing, the interspaces 10 and 11 each bears two white spots; postdiscal stripe dislocated at vein 4; the area between discal and postdiscal stripes brownish white. On the hindwing, an oblique fine white stripe present at the base of interspace 8; tornal area with three black spots, of which the anteriormost one is the largest, and sparsely dusted with bluish scales.

Length of forewing: 19 mm.

Male genitalia:— Brachia stout, hammer-like in shape, with acute tip. Valvae small, strongly broadened basad. Phallus large, with large coecum; suprazonal portion slightly reflexed, more or less dilated towards apex in dorsal view; apical opening oblique and narrowly edged with perivesical area in lateral aspect. Juxta V-shaped, with lateral corners remarkably produced in front.

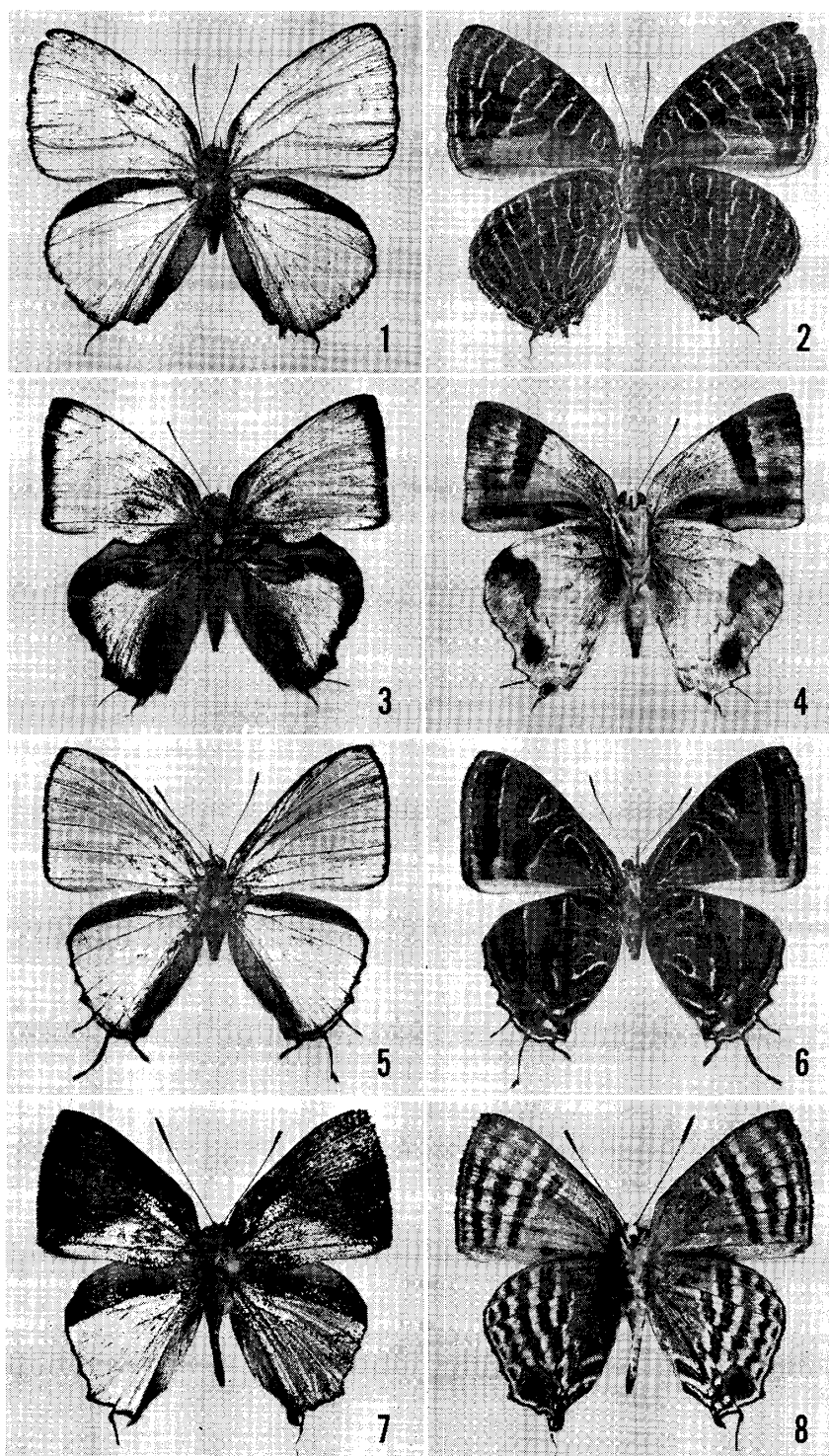
♀. Unknown.

Distribution: Mt. Apo, Mindanao.

Holotype ♂, Mt. Apo, Mindanao, October, 1978.

This species is unique in the markings on the underside, which do not agree with those of any group in *Narathura*, but appears to be related to *theba* HEWITSON and *aronya* HEWITSON in the *theba* group. It is distinguished from the above-mentioned species by the following points: 1) violet colour on the upperside darker than in *aronya*; 2) interspaces 7, 9, 10 and 11 of forewing provided with several white spots, but no markings exist above cell in *theba* and long white stripes exist at the bases of costa and vein 12 in *aronya*; 3) no round markings present except in basal area, whereas markings are more or less rounded in *theba*; 4) white stripes on the underside fine, while they are broad and conspicuous in *aronya*.

The new species name is dedicated to my late father, Matsutarô, who passed away in November 1978.



Figs. 1-8. Holotypes of new Philippine lycaenid butterflies, upperside (1, 3, 5, 7), underside (2, 4, 6, 8).—1-2. *Narathura matsutaroi* n. sp., ♂.—3-4. *Eliotia kazuyai* n. sp., ♂.—5-6. *Catapaecilma nakamotoi* n. sp., ♂.—7-8. *Sinthusa natsumiae* n. sp., ♂.

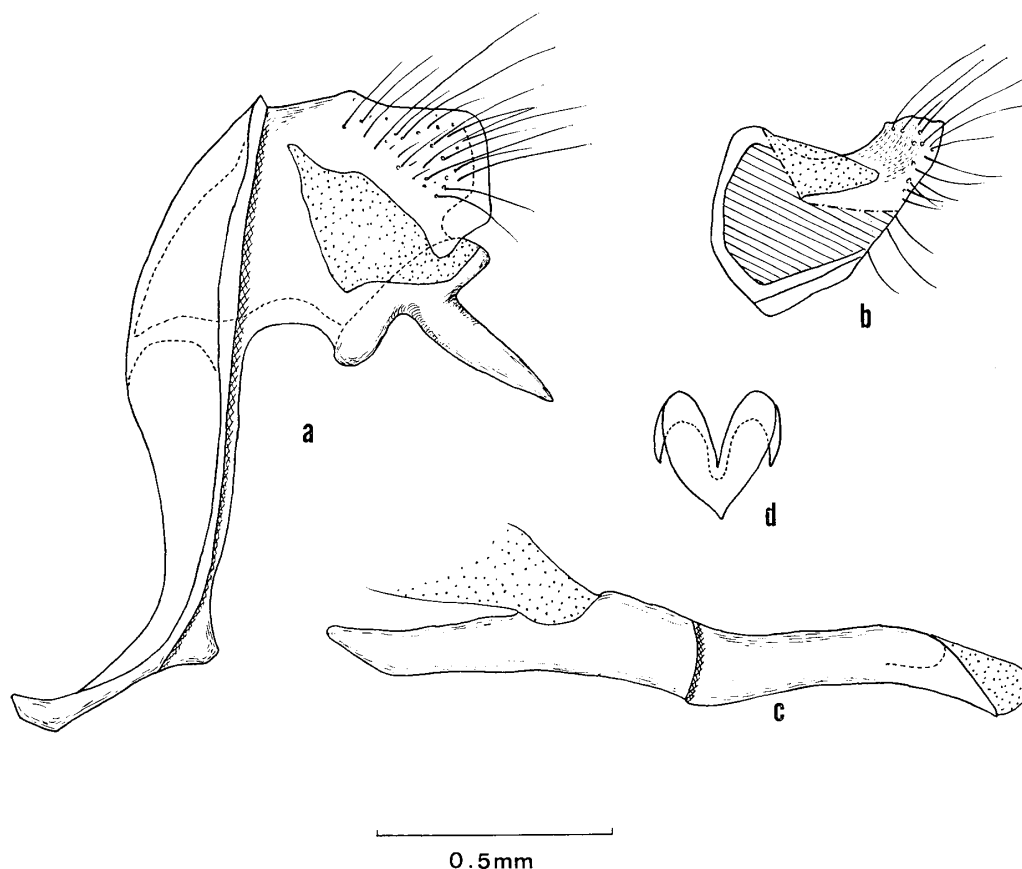


Fig. 9. *Narathura matsutaroi* n. sp., male genitalia: (a) lateral aspect of ring; (b) inner aspect of right valva; (c) lateral aspect of phallus; (d) juxta.

***Eliotia kazuyai* H. HAYASHI, sp. nov.**

(Figs. 3, 4, 10)

♂. Termen of forewing subrectangular at the inner angle; dorsum obviously convex in basal half. Hindwing with two tails.

Upperside:— Deep metallic blue. Forewing narrowly edged with black on the costal margin, much more broadly on the distal margin, the distal black becoming narrower posteriorly. On the hindwing, the marginal black is broad, especially on the costal side, where it covers the cell and two interspaces and is overlaid by a large brand around the origin of vein 7; tails black, with white tips; anal portion brownish black, with white marginal cilia and long black hairs along vein 1b.

Underside:— Grayish white with chocolate brown markings. On the forewing, grayish scales become sparser and partially disappear in the distal part; postdiscal band distinct, chocolate brown and becoming narrower posteriorly; interspace 1b and a large part of 2 chocolate brown; a sexual brand consisting of a tuft of black recumbent hairs present at the middle of the posterior margin. Hindwing narrowly bordered with black on the distal margin, which is fringed with white cilia; chocolate brown postdiscal band curved outwards in the costal area and continuing into a narrow sinuate line behind vein 4; tornal area with a black spot surrounded by a

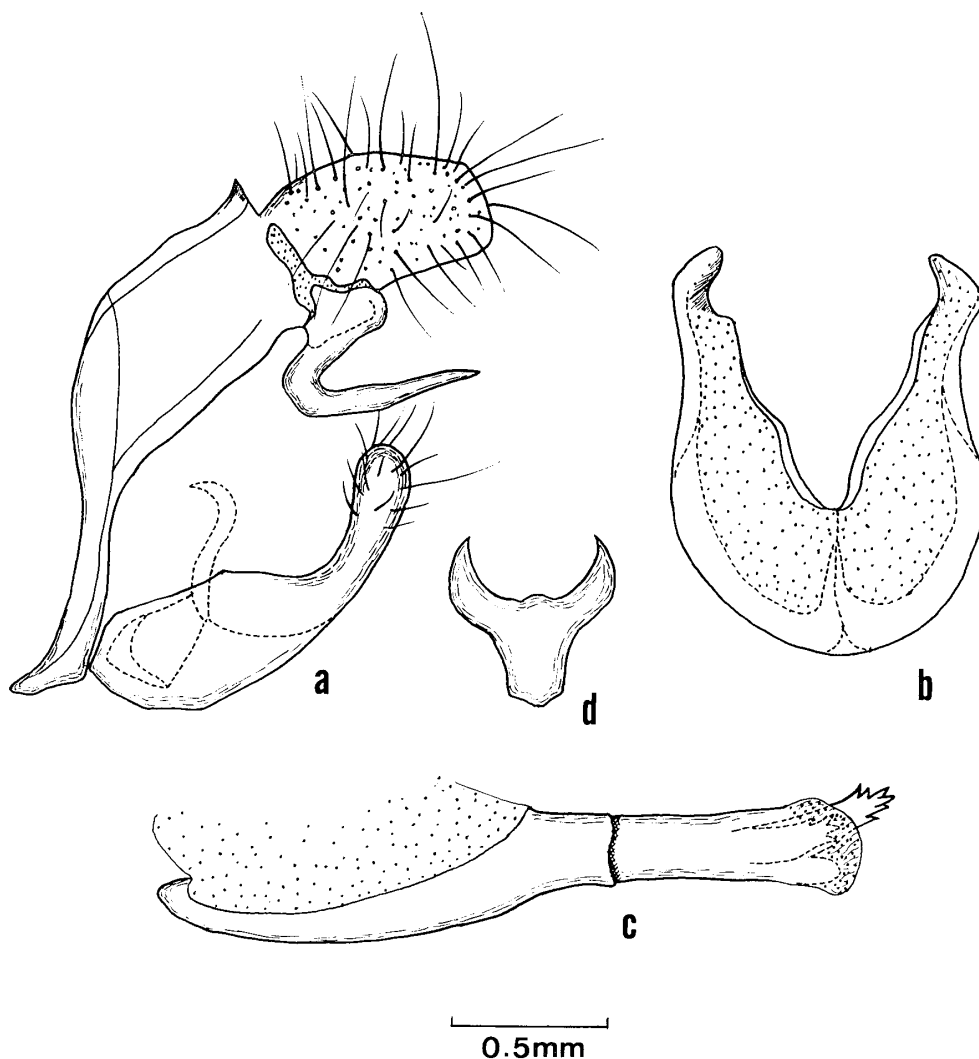


Fig. 10. *Eliotia kazuyai* n. sp., male genitalia: (a) lateral aspect with phallus removed; (b) dorsal aspect of valvae; (c) phallus; (d) juxta.

conspicuous ochreous area; another black spot present at the base of posterior tail, being distally surrounded by fine grayish line and proximally specked with ochreous dot and a group of bluish scales.

Length of forewing: 19 mm.

Male genitalia:— Juxta Y-shaped. Valvae stout, with inwardly curved apices, whose extremities are blunt. Phallus long, with two spinose cornuti, one of which is long, while the other is short.

♀. Unknown.

Distribution: Mt. Apo, Mindanao.

Holotype ♂, Mt. Apo, Mindanao, January, 1979.

The present new species resembles *Eliotia mioae* H. HAYASHI, but differs from it in the following respects: 1) Dorsum of forewing remarkably convex in proximal half; 2) blue colour of the upperside deeper; 3) distal black margin of forewing narrower; 4) hindwing with much larger sexual brand; 5) postdiscal band of hindwing

curved outwards at vein 7 and continuing into a sinuate stria behind vein 4 (straight and band-like throughout in *mioae*).

This new species is named in honour of Mr. Kazuya NAKAMOTO who is always willing to help my studies.

*Catapaecilma nakamotoi* H. HAYASHI, sp. nov.

(Figs. 5, 6, 11)

♂. Upperside:— Metallic violet, darker in the forewing and bluish in the hindwing; costal margin narrowly black in the forewing, much more widely in the hindwing, distal margins narrowly black together with their cilia in both the wings; anal portion black, wholly covered with grayish white hairs proximally mingled with bluish scales; hindwing with a fine bluish line along the distal margin between three tails, which are black and tipped with white.

Underside:— Ochreous, with brownish black bands as illustrated (Fig. 6); these bands are finely edged with silver either on both sides or at least on the proximal side with the exception of the submarginal which is edged on the distal side. On the forewing, the marginal brownish black is not edged with silver; other bands become paler in interspace 1 and the silver of the edging lines becomes disappeared posteriorly;

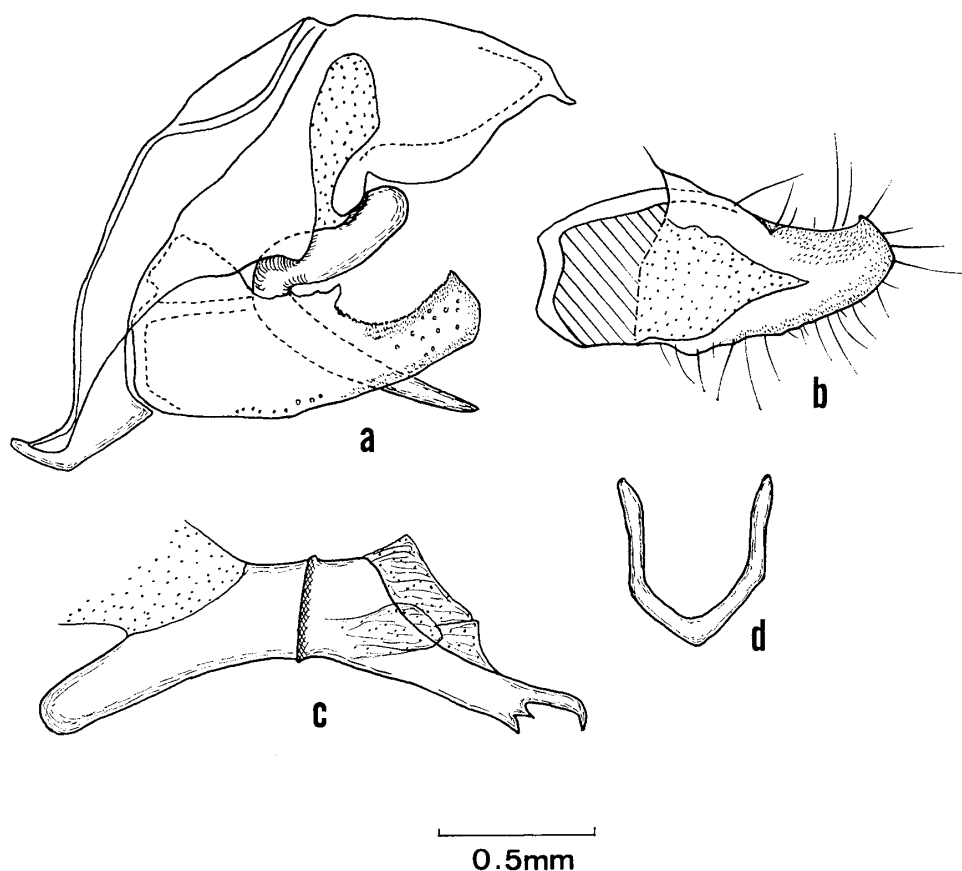


Fig. 11. *Catapaecilma nakamotoi* n. sp., male genitalia: (a) lateral aspect with phallus removed; (b) inner aspect of right valva; (c) lateral aspect of phallus; (d) juxta.

interspace 1 mostly brownish gray, though interrupted by vertical bands and their edging lines; anal portion grayish white. On the hindwing, the discal bands and fascia form an anastomosis at middle, and the submarginal and ante-submarginal bands are abbreviated behind, leaving two silver dots in the interspaces 2 and 3 on the site of silver edge of the ante-submarginal.

Length of forewing: 17 mm.

Male genitalia:— Brachia stout, hammer-like in shape, with sharp tip. Valvae slightly reflexed at apex and distinctly denticulate on the dorsal side; distal and subdistal portion closely serrulate on the internal side. Juxta U-shaped. Phallus stout, suprazonal portion of aedeagus nearly a half as long as phallus, aedeagal apex distinctly trifid in lateral view, the dorsalmost tooth being much larger than the other two and hooked at the extremity.

♀. Unknown.

Distribution: Mt. Apo, Mindanao.

Holotype ♂, Mt. Apo, Mindanao, October, 1978.

The present new species resembles *Catapaecilma evansi* PENDLEBURY, but differs from it in the following respects: 1) Dark bands on the underside black and broad, instead of reddish-brown and narrow in *evansi*; 2) silver lines finer, not so conspicuous and broad as in *evansi*; 3) discal dark bands on forewing close to each other in interspaces 4, 5 and 6; 4) discal band and fascia on hindwing joining at middle, not separated by a silver line as in *evansi*.

This new species is named after Mr. Kazuya NAKAMOTO who gave me the privilege of studying the materials dealt with in this paper.

*Sinthusia natsumiae* H. HAYASHI, sp. nov.

(Figs. 7, 8, 12)

♂. Upperside:— Metallic cyaneous blue, with the costal and distal margins black. On the forewing, the costal black extends onto the cell and the distal black becomes narrower posteriorly; black scales spread out onto the distal two-thirds, covering and mingling with cyaneous ones. On the hindwing, the costal black is very broad, covering two interspaces, while the distal one is extremely narrow; tail black, with white tip; anal portion black, largely covered with grayish white hairs. Hindwing tailed at vein 2 and with a pendulous lobe at vein 1c.

Underside:— Gray in basal half and dark gray in distal half, with sinuate white stripes as illustrated (Fig. 8). Forewing with a sexual brand consisting of a tuft of black recumbent hairs at the middle of the posterior margin. Hindwing with a black tornal spot surrounded by conspicuous ochre area in interspace 2 and another small black spot on the lobe; a very narrow ochre stripe present through the central line of discal dark gray band, and also at the apical portions of the outer bands.

Length of forewing: 12 mm.

Male genitalia:— Dorsum moderately large, socius very short, its postero-ventral margin being straight or slightly concave. Brachia with the basal portion inwardly swollen. Valvae fused with each other at the basal half of the ventral edge, each with blunt apex. Phallus very large and long, vesical opening of aedeagus

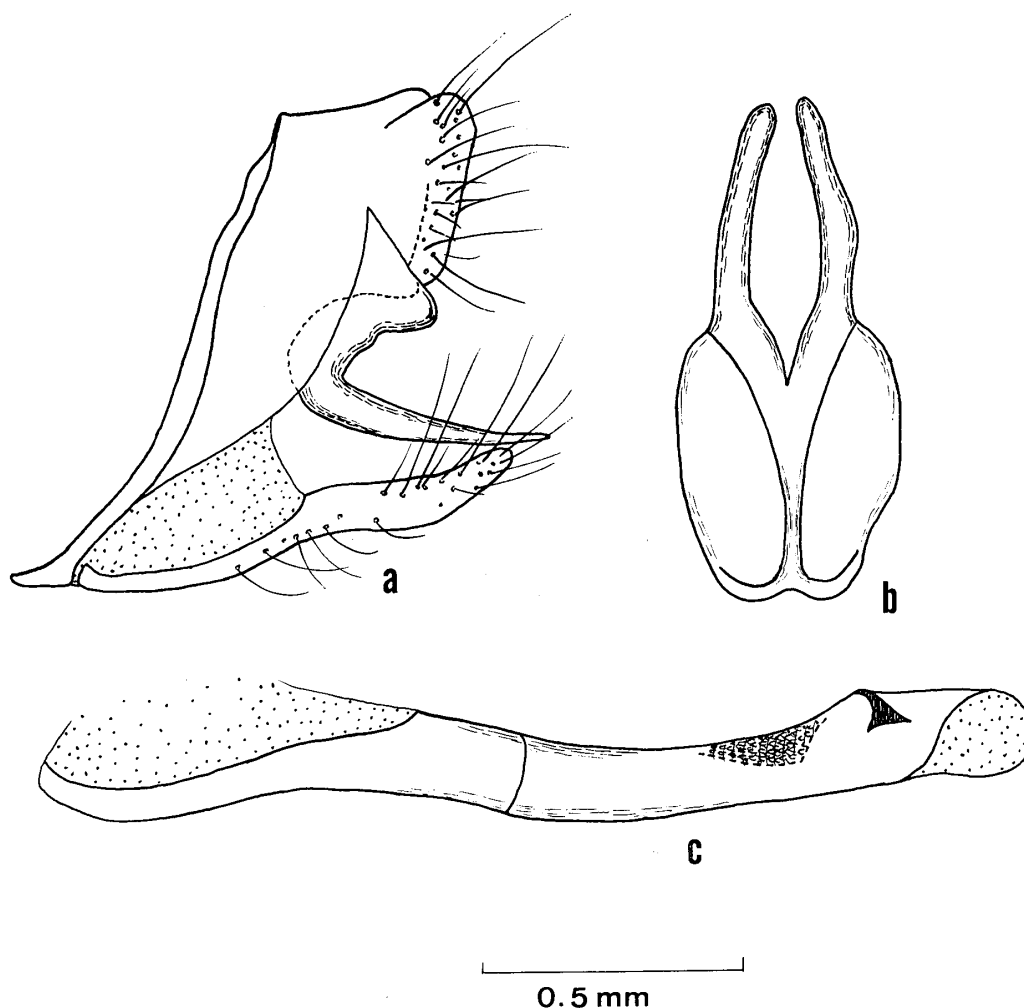


Fig. 12. *Sinthusa natsumiae* n. sp., male genitalia: (a) lateral aspect with phallus removed; (b) dorsal aspect of valvae; (c) phallus.

oblique. A lamella and a triangular cornutus present.

♀. Unknown.

Distribution: Mt. Apo, Mindanao.

Holotype ♂, Mt. Apo, Mindanao, September, 1978. Paratypes 2 ♂♂, Mt. Apo, Mindanao, October, 1978.

This is a unique species and is easily distinguished from its relatives, *S. mindanensis* H. HAYASHI, H. SCHROEDER et C. TREADAWAY and *S. peregrinus* SEMPER by the coloration of its upperside, metallic cyaneous blue in the former, but purple or purplish blue at least on the hindwing in the latter two. The underside of the present species most closely resembles that of *S. mindanensis*, but both the discal dark gray band and white stripe are absent in the latter species. It is also distinguished from all the other congeners by having blunt apices of the valvae of its male genitalia.

This new species is named after my daughter, Natsumi.

### **Acknowledgments**

I am grateful to Mr. Kazuya NAKAMOTO for his effort of collecting butterflies on Mt. Apo, Mindanao and for his kindness in giving me an opportunity to study them. Deep gratitude is also due to Dr. Yoshihiko KUROSAWA and Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for their kind help in preparing the manuscript of this paper.